Graz. Each of these patients was placed upon a diet affording the proper number of *calorien* daily, according to his body-weight, and was kept upon this diet for the full period of the experiment, which lasted usually for from five to six days. It was thus possible to make the amount of nitrogen eliminated about constant from day to day; the total nitrogen ingested, as well as the total nitrogen given off in the urine and feces, were estimated by Kjeldahl's method. In addition, the alloxur-bodies were estimated by the Kruger-Wulf method, and in two instances the uric acid was also estimated, the method of Ludwig being employed for this purpose.

Kolisch had stated the normal amount of alloxur-body-nitrogen for twenty-four hours to be 0.260 gramme. A comparison of the few estimations that have been made by other investigators would make this value appear to be rather too low. When the alloxur-body-nitrogen reaches 0.4 gramme, or a little more than this, it may, according to Futcher, be considered as physiologically high, while amounts reaching 0.5 gramme or more may be said to be pathological. Futcher's study of his eight cases seems to prove conclusively that there is no definite connection between Neusser's granules and the elimination of the alloxur-bodies in the urine. He found instances in which the granules were numerous, even extremely numerous, while the quantity of alloxur-bodies in the urine was relatively low. In other instances, where the amount of alloxur-bodies was high the granules could be present in very small numbers. He further observed in two patients suffering from the same disease (hypertrophic cirrhosis of the liver) daily variations in the richness of the granules which were quite apparent, and which were not associated with any corresponding rise or fall in the quantity of alloxur-bodies excreted. On the contrary, an increase in the granules could even be associated with a diminution in the alloxur-bodies and *vice versa*. A direct relation between the presence of Neusser's granules in the blood and an increased elimination of the alloxur-bodies, in the urine must therefore, Futcher thinks as a result of his experiments, be denied.

Herpes Zoster and Facial Paralysis.—EICHHORST (*Centralbl. f. innere Med.*, 1897, No. 18). This combination of symptoms is very rare. Ebstein, in 1895, was able to collate but eleven cases. The author has found seven others, and adds the following of his own: a woman, aged twenty years, no nervous disease in family, three children. Trouble began the day after sitting in a draught, with a drawing sensation in right side of face, slight tenderness over right eyebrow, followed by pain radiating from neck to back of head and on right side. On the third day a total right-sided facial paralysis. Four days later a vesicular eruption on the lower half of the right ear and in the auditory canal, on the right half of the tongue, uvula, and palate. The paralysis was very marked, with complete reaction of degeneration. The tongue protruded straight; touch and taste unimpaired. Sensation of face intact. No tenderness at points of exit of the fifth and seventh nerves. No cerebral symptoms. So far as the author knows, this is the fourth case in which the paralysis preceded the herpes. In all such cases, too, the herpes has been limited to the trigeminal distribution. The occurrence of such herpes on the mucous membrane has been described by Remak alone. It is well known that in facial paralysis of peripheral origin there occurs a gustatory paralysis of the anterior two-thirds of one-half of the tongue. From the case above, where this does not occur, we must conclude that the chorda tympani carries both taste and trophic fibres. Eichhorst thinks the phenomena in his case may be explained as follows: the trigeminus branches were involved; the tongue herpes was caused by continuation of the inflammation from the facial to the chordia tympani and affecting only its trophic fibres.

SURGERY.

UNDER THE CHARGE OF
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Cysts and Cystic Tumors of the Breasts.—SASSE (*Arch. für klin. Chir.*, 1897, Band liv. Heft 1), after a careful pathological and clinical study of a series of cases, which are reported in detail, arrives at the following classification of the cystic tumors of the breasts, which he divides into two principal groups:

1. Those produced by a chronic interstitial inflammation and resulting in a widening of the excretory ducts into cysts—mastitis chronica cystica, König.

2. Multiple cysts of the breasts resulting from a pure epithelial hypertrophy and cystic dilatation of the acini—polycystoma mammæ—which frequently are bilateral and are described by Reclus as maladie kystique, and by Schimmelbusch as cystadenoma. They have the same origin as the small cysts which are found in the sound portion of a breast hardened by carcinomatous disease in profuse numbers, and are found on the undersurface of the gland. The relationship between carcinoma and cyst-formation is shown by the ease with which the polycystoma—that is, the cystadenoma diffusum—can change into the carcinoma; so may, on the other hand, carcinoma of the breast cause, by the resulting irritation of its growth, the above cysts.

Among the cystic tumors there are many forms, which may be readily distinguished one from another and readily illustrated by groups of cases. From the cystic connective-tissue tumors, the cystosarcoma and fibro-adenoma, we have traced the relation to the epithelial tumors, and have first described the formation of the intracanicular cystic adenoma—how they originate in the walls of the excretory ducts as adenomatous hypertrophies, which fill up the lumen of the chest and then cause its dilatation and the formation of cysts finally developing into enormous tumors. The circumscript cystic adenoma (tubular of Billroth) was shown to be a nonencapsulated but well-defined tumor, which makes its appearance in the glandular structure of young individuals, especially in the terminal branches of the glands, the smallest canaliculi and acini, while the excretory canals are but slightly affected.

All of these tumors are benign in their nature; the newly formed gland-tissue conforms, though in an irregular manner, to the physiological type, and the epithelium never infiltrates into the surrounding tissues. It is otherwise in the last group, the cystic adenoma proliferum and the cystocarcinoma. Both arise from the acini by cystic dilatation, and depend entirely upon a profuse proliferation of the epithelium.

In the cystic adenoma proliferum the connective tissue is not so widely involved—only so much as goes to form the foundation and stroma of the bloodvessels, which are a part of the papillæ and gland-tissues. But also here the epithelium enters into the lymph-spaces, infiltrating and infecting just as in carcinoma, and the development of the one into the other is not rare. The cystocarcinoma is indistinguishable from the soft carcinoma except in its location; it exemplifies the last stage of cystic degeneration of the mammæ.

The Treatment of Insect-bites.—Ottinger (*Munch. med. Woch.*, 1896, No. 49) recommends highly the use of ichthyol as an application to insect-bites, either painted on with a brush or in the form of an ointment or as an adhesive plaster containing 10 per cent. of the drug. In a few moments the pain, burning, itching, etc., cease and the swelling goes down rapidly.

Bacteriology of Appendicitis.—From the examination of the exudate at the time of operation in twenty cases of appendicitis, Achard and Broca (*Gaz. Heb. de Méd. et de Chir.*, April 1, 1897) found that the bacterium most frequently met with is the coli bacillus, and it is not to be doubted that this bacterium may exist in the exudate alone. In the cases examined, all purulent, ten cases were associated with other bacteria; most prominent among these were six cases in which the streptococcus was found.

This prominence of the streptococcus leads to the belief that it plays an important part in peri-appendicular peritonitis. It is probable that the coli bacillus acts only secondarily, but owing to its greater vitality is reproduced more rapidly, and is in consequence more numerous.

The pneumococcus was found in one case, while in three cases in which perforation occurred there were no coli bacilli present.

It is probable that in appendicitis, as in other cases of suppuration, the coli bacillus is aided by other bacteria, while it does not wait long before it outnumbers and destroys them.

The Disinfection of the Hands.—This subject, which is of such great importance in clinical surgery, has been carefully studied by Wier (*Medical Record*, April 3, 1897), whose studies lead him to the following conclusions:

1. That the solutions of corrosive sublimate are unreliable.
2. That such disinfection is far best applied, and in the order named, by the use of nascent chlorine, alcohol, or potassium permanganate.

3. That chlorine is satisfactorily evolved by the conjoined use of moistened chemical chlorinated lime and crystallized sodium carbonate.

4. That of these three procedures the chlorine treatment is least hurtful to the hands; alcohol the most trying.

The author has devised a simple, easy, and inexpensive yet efficient method of obtaining the sterilization by nascent chlorine.

After the usual scrubbing with soap and water, and the use of green soap, and cleaning the periungual spaces, one or more large crystals of carbonate of sodium (washing soda) are taken in one hand and covered with about a tablespoonful of bleaching powder (chlorinated lime), and enough water is added to make a thin paste, which at first feels warm, and from which fresh chlorine gas comes. This is rubbed for two or three minutes over the hands, nails, and forearms until a creamy paste is formed or until the sodic crystals impart a cool sensation or until the rough grains of bleaching-powder have mostly disappeared, when the hands are washed in sterile water.

Intravenous Injections of Mercury in Syphilis.—BYLES (*British Medical Journal*, April 3, 1897) gives the following technique for the treatment of syphilis by this method:

That each separate injection be successful is of primary importance, due to the fact that it has to be repeatedly performed, while the only veins available are those of the upper arm and forearm. The apparatus required is a hypodermatic syringe with a glass piston, two platino-iridium needles, the solution to be used, and a piece of rubber tubing for a tourniquet.

The patient's arm is bared to the shoulder, and he holds the tourniquet. A prominent vein is chosen—not near the elbow, on account of motion; preferably the cephalic or one of the prominent veins of the forearm. The syringe is now filled with the solution employed, the needle affixed and sterilized in the flame of a spirit-lamp. All air-bubbles should be clear of the syringe. The syringe should be of glass, with asbestos-packing, and hold twenty to forty minims. This syringe may be sterilized by boiling.

To insert the needle into the vein chosen hold the syringe almost horizontally and in the direction of the blood-stream. It is an important point that if the needle has failed to enter the vein, movement of the needle, especially depression, will give rise to dimpling of the skin; whereas if the needle is in the vein, not only is the movement free, but in many cases blood will pass into the syringe and color the solution.

The patient is now told to release the tourniquet gently. After this has been done the least possible quantity of injection is thrown into the vein; if the patient feels nothing, the vein has been successfully entered and the injection may be completed; if, however, the patient complains immediately of smarting pain, withdraw the needle, as the vein has been missed and the solution is passing into the subcutaneous tissue.

By careful attention to these details the painful bruising arising from a misplaced injection is rendered a matter of impossibility. In a few cases some staining may appear at the site of the injection a day or two after, from a few drops of blood from the vein having escaped into the surrounding tissue. If there has been a greater escape of blood, there may occur a peri-